T0240"8h0hh360

FIG. 1

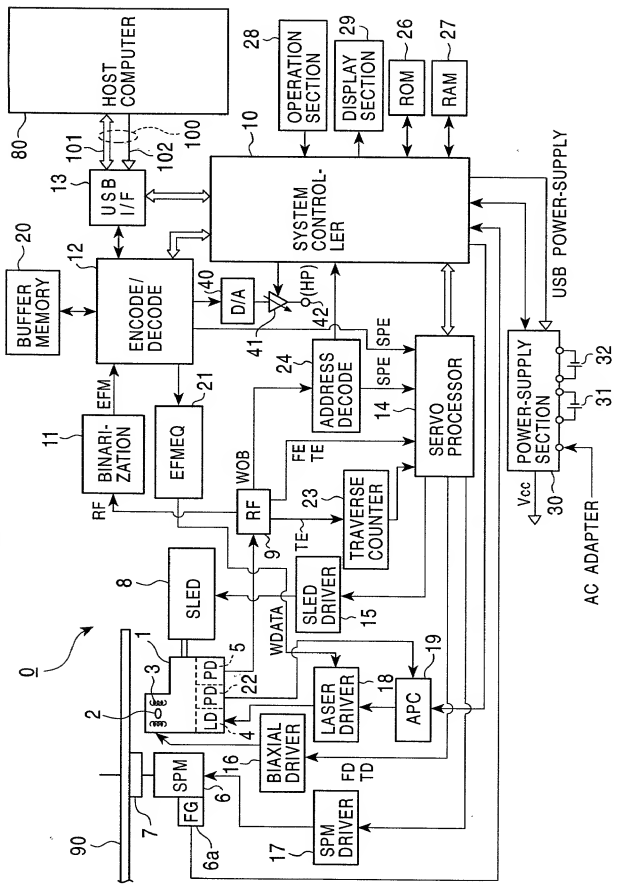

FIG. 2

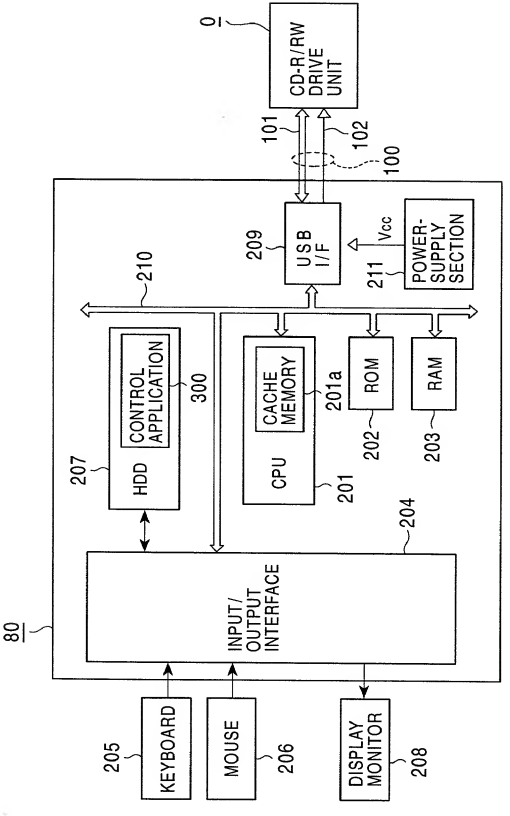
0
CD-R/RW DRIVE UNIT
101
102
100
209
USB I/F
Vcc
211
POWER-SUPPLY SECTION
210
80
INPUT/ OUTPUT INTERFACE
204
207
HDD
CONTROL APPLICATION
300
CPU
201
CACHE MEMORY
201a
ROM
202
RAM
203
205
KEYBOARD
MOUSE
206
DISPLAY MONITOR
208

FIG. 3

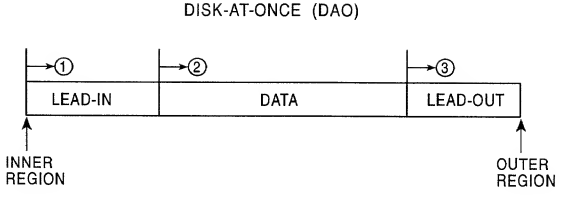
DISK-AT-ONCE (DAO)
①
②
③
LEAD-IN
DATA
LEAD-OUT
INNER REGION
OUTER REGION

FIG. 4

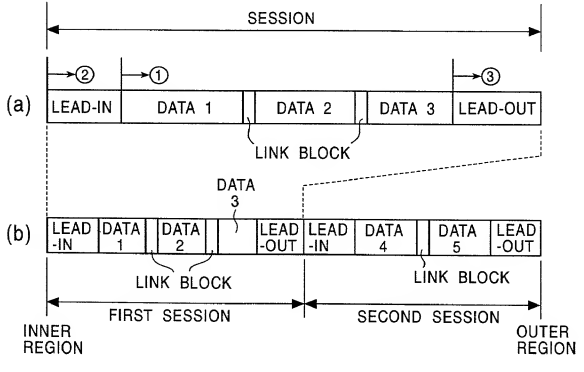
TRACK-AT-ONCE (TAO)
SESSION
②
①
③
(a)
LEAD-IN
DATA 1
DATA 2
DATA 3
LEAD-OUT
LINK BLOCK
DATA 3
(b)
LEAD -IN
DATA 1
DATA 2
LEAD -OUT
LEAD -IN
DATA 4
DATA 5
LEAD -OUT
LINK BLOCK
LINK BLOCK
FIRST SESSION
SECOND SESSION
INNER REGION
OUTER REGION

FIG. 5

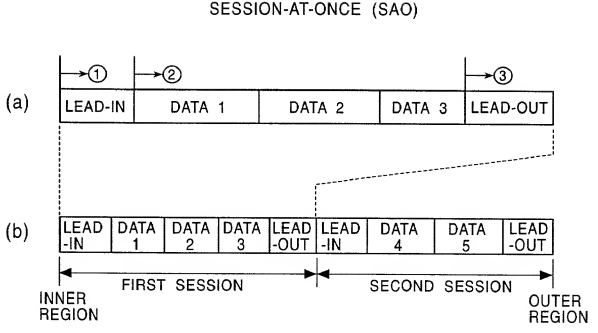
SESSION-AT-ONCE (SAO)
(a)
①
②
③
LEAD-IN
DATA 1
DATA 2
DATA 3
LEAD-OUT
(b)
LEAD -IN
DATA 1
DATA 2
DATA 3
LEAD -OUT
LEAD -IN
DATA 4
DATA 5
LEAD -OUT
FIRST SESSION
SECOND SESSION
INNER REGION
OUTER REGION

FIG. 6

byte	bit							
	7	6	5	4	3	2	1	0
0	Operation Code (D5h)							
1	Reserved							
2	Reserved		Page Code (000001b)					
3	Reserved							
4	Reserved							
5	Reserved							
6	Reserved							
7	(MSB) Allocation Length							
8	(LSB)							
9	Reserved							
10	Reserved							
11	Reserved							

FIG. 7

byte	bit 7	6	5	4	3	2	1	0
0	Reserved		Page Code (000001b)					
1	Page Length (28h)							
2	The kind of power supply which is connected physically at present and which can be used. (Reserved)				USB/1394 /PCMCIA BUS	Dry cell	Rechar-geable battery	AC adapter
3	The kind of power supply which is actually being used at present. (Reserved)				USB/1394 /PCMCIA BUS	Dry cell	Rechar-geable battery	AC adapter
4	The power supply which can be used when this drive reads data as a computer peripheral. (Reserved)				USB/1394 /PCMCIA BUS	Dry cell	Rechar-geable battery	AC adapter
5	The power supply which can be used when this drive writes data as a computer peripheral. (Reserved)				USB/1394 /PCMCIA BUS	Dry cell	Rechar-geable battery	AC adapter

FIG. 8

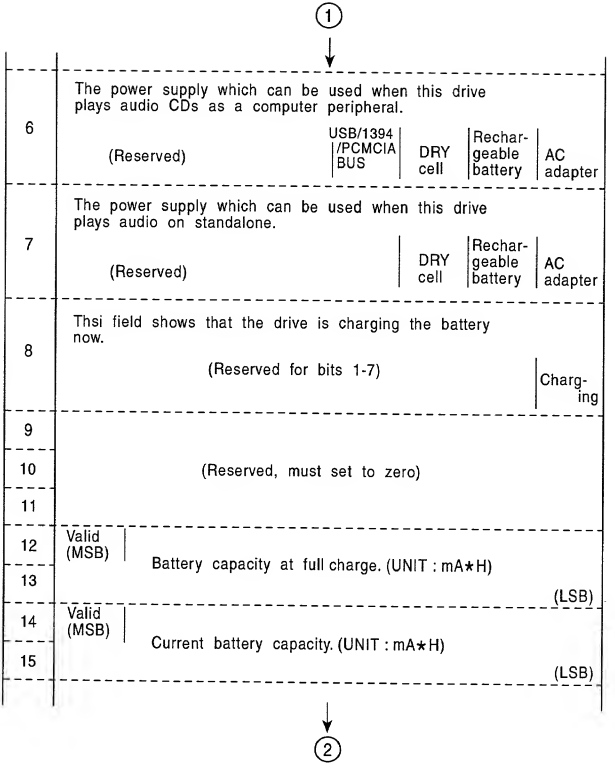

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FIG. 9

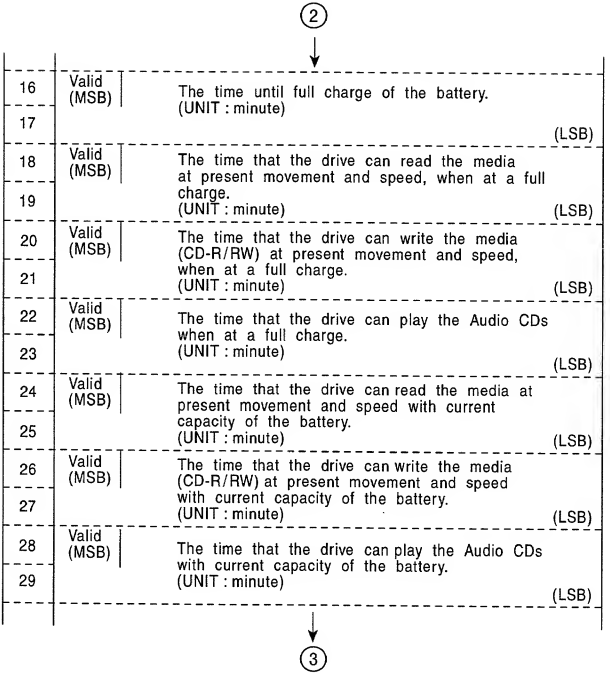
2
16
17
Valid (MSB)
The time until full charge of the battery. (UNIT : minute)
(LSB)
18
19
Valid (MSB)
The time that the drive can read the media at present movement and speed, when at a full charge. (UNIT : minute)
(LSB)
20
21
Valid (MSB)
The time that the drive can write the media (CD-R/RW) at present movement and speed, when at a full charge. (UNIT : minute)
(LSB)
22
23
Valid (MSB)
The time that the drive can play the Audio CDs when at a full charge. (UNIT : minute)
(LSB)
24
25
Valid (MSB)
The time that the drive can read the media at present movement and speed with current capacity of the battery. (UNIT : minute)
(LSB)
26
27
Valid (MSB)
The time that the drive can write the media (CD-R/RW) at present movement and speed with current capacity of the battery. (UNIT : minute)
(LSB)
28
29
Valid (MSB)
The time that the drive can play the Audio CDs with current capacity of the battery. (UNIT : minute)
(LSB)
3

FIG. 10

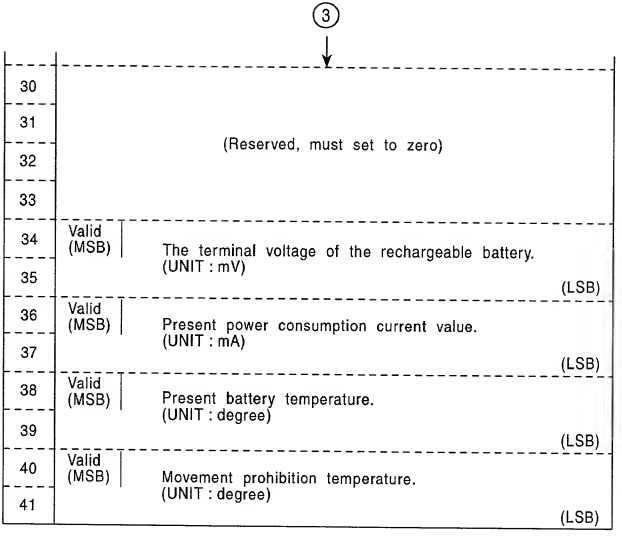
③
30
31
32
33
(Reserved, must set to zero)
34
35
Valid (MSB)
The terminal voltage of the rechargeable battery. (UNIT : mV)
(LSB)
36
37
Valid (MSB)
Present power consumption current value. (UNIT : mA)
(LSB)
38
39
Valid (MSB)
Present battery temperature. (UNIT : degree)
(LSB)
40
41
Valid (MSB)
Movement prohibition temperature. (UNIT : degree)
(LSB)

FIG. 11

POWER-SUPPLY STATE		CONTROL
AC ADAPTER CONNECTION		READ/WRITE PERMITTED, POWER SAVING MODE NOT-SET (RELEASED)
BATTERY	FIRST STAGE	READ/WRITE PERMITTED, FIRST LEVEL POWER SAVING MODE SET
		< BOUNDARY VALVE 1 >
	SECOND STAGE	READ/WRITE PERMITTED, SECOND LEVEL POWER SAVING MODE SET
		< BOUNDARY VALVE 2 >
	THIRD STAGE	READ-ONLY PERMITTED (WRITE PROHIBITED), SECOND LEVEL POWER SAVING MODE SET; WARNING DISPLAY
		< BOUNDARY VALVE 3 >
	FOURTH STAGE	FORCED CLOSING PROCESS

FIG. 12

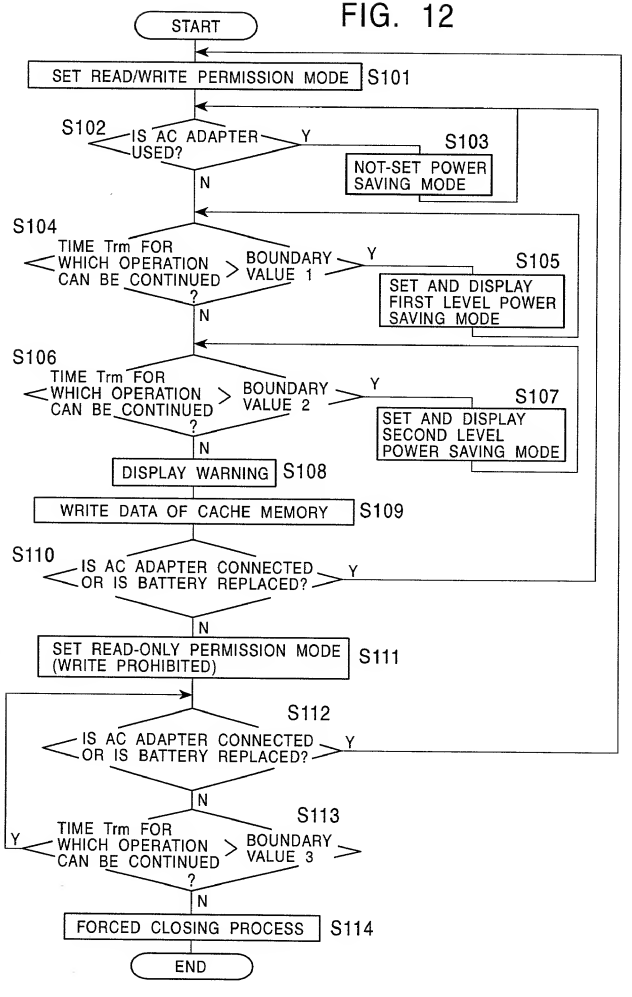
START
SET READ/WRITE PERMISSION MODE
S101
S102
IS AC ADAPTER USED?
Y
S103
NOT-SET POWER SAVING MODE
N
S104
TIME Trm FOR WHICH OPERATION CAN BE CONTINUED
BOUNDARY VALUE 1
Y
S105
SET AND DISPLAY FIRST LEVEL POWER SAVING MODE
N
S106
TIME Trm FOR WHICH OPERATION CAN BE CONTINUED
BOUNDARY VALUE 2
Y
S107
SET AND DISPLAY SECOND LEVEL POWER SAVING MODE
N
DISPLAY WARNING
S108
WRITE DATA OF CACHE MEMORY
S109
S110
IS AC ADAPTER CONNECTED OR IS BATTERY REPLACED?
Y
N
SET READ-ONLY PERMISSION MODE (WRITE PROHIBITED)
S111
S112
IS AC ADAPTER CONNECTED OR IS BATTERY REPLACED?
Y
N
S113
TIME Trm FOR WHICH OPERATION CAN BE CONTINUED
BOUNDARY VALUE 3
Y
N
FORCED CLOSING PROCESS
S114
END

FIG. 13

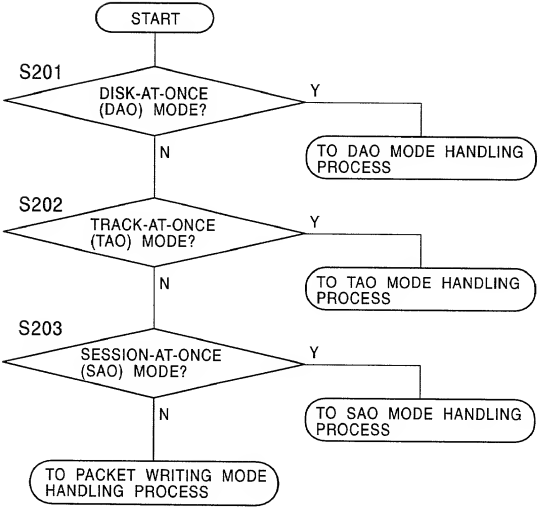
START
S201
DISK-AT-ONCE (DAO) MODE?
Y
TO DAO MODE HANDLING PROCESS
N
S202
TRACK-AT-ONCE (TAO) MODE?
Y
TO TAO MODE HANDLING PROCESS
N
S203
SESSION-AT-ONCE (SAO) MODE?
Y
TO SAO MODE HANDLING PROCESS
N
TO PACKET WRITING MODE HANDLING PROCESS

FIG. 14

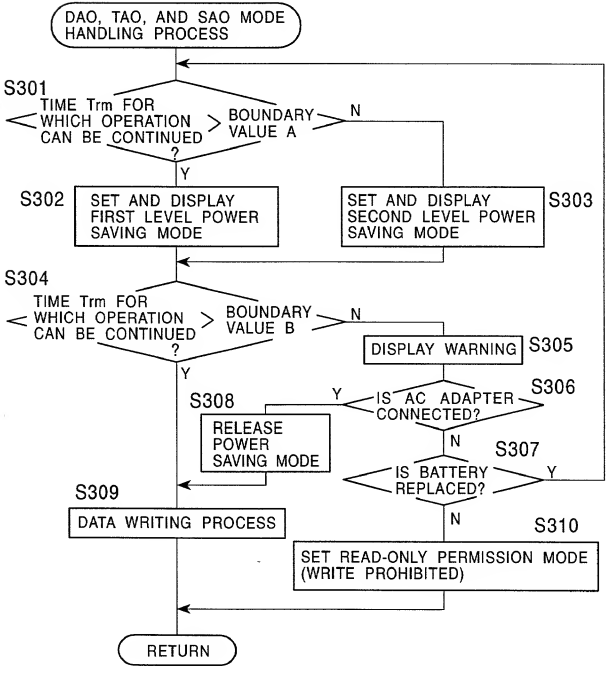
DAO, TAO, AND SAO MODE HANDLING PROCESS
S301
TIME Trm FOR WHICH OPERATION CAN BE CONTINUED
BOUNDARY VALUE A
N
Y
S302
SET AND DISPLAY FIRST LEVEL POWER SAVING MODE
SET AND DISPLAY SECOND LEVEL POWER SAVING MODE
S303
S304
TIME Trm FOR WHICH OPERATION CAN BE CONTINUED
BOUNDARY VALUE B
N
Y
DISPLAY WARNING
S305
S306
IS AC ADAPTER CONNECTED?
Y
N
S308
RELEASE POWER SAVING MODE
S307
IS BATTERY REPLACED?
Y
N
S309
DATA WRITING PROCESS
S310
SET READ-ONLY PERMISSION MODE (WRITE PROHIBITED)
RETURN

FIG. 15

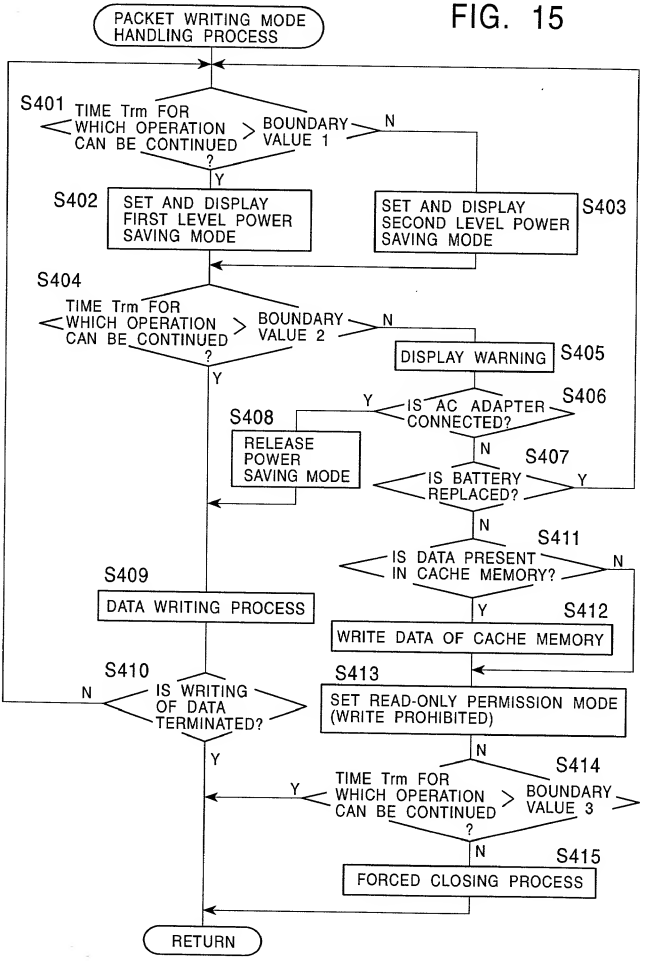

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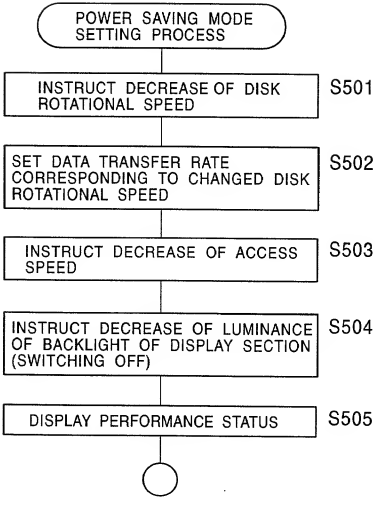
FIG. 16



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